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[Despatch Abstract.]

Agriculture - Research. Agriculture
Research Station - Siruguppa,
Bellary District - Publication of
article on Agricultural problems
of Tungabhadra project prepared
by the Dy. Director of Agriculture
Tungabhadra Project in "India
Journal of Agricultural Research.

From

Sri. V. Chinnaswamy Naidu, B.Ag.,
Deputy Director of Agriculture,
Tungabhadra Project,
Siruguppa. (Bellary Dt.).

To

The Secretary to Government,
Development Department,
Fort St. George,
Madras.

Through The Director of Agriculture,
Madras.

Rdl. No.17 G. 47 dated 15-10-47.

Sir,

Sub: Quarterly report ending 30th September 1947.

I submit the following quarterly report ending 30th September 1947.

1. Charge : As per G.O. No.No.5111, Development, dated the 11th July 1947, I assumed charge of the office of the Deputy Director of Agriculture, Tungabhadra Project, on 1.7.47. I was in additional charge of the post of the Agronomist till 5-8-47, which post I was relieved by Sri. V. Narasimhan, the District Agricultural Officer, Bellary.

2. Survey of the tract : For reasons stated above and the [illegible] conditions were received in August - September it was not possible to do extensive touring during the quarter. However I had a preliminary visit to Bayaldevy and Adoni to inspect some well-irrigated tracts of these centres where garden cultivation is done under wells. At Bayaldevy I could see a large number of cultivators raising crops under garden land cultivation. Crops like 'neem-jowar', 'ragi', chillies, onions and vegetables were grown under irrigation. Each holding averaged about two to three acres, and the maximum area cultivated by any one individual was not more than five acres. Some enterprising cultivators also raised fruit gardens where mangoes and citrus were chiefly grown. Under lands paddy was also grown.

At Adoni, the cultivation of garden crops under wells is confined to a very limited scale, and paddy is cultivated on a large scale under the tanks. Vegetables are grown to a limit extent along the railway line between Adoni and Tungabhadra railway station. Though a very large extent of the soil now lying waste in this area permits cultivation of garden crops and raising orchards, the lack of interest evinced by the cultivators for well irrigation was attributed to extreme scarcity of labour. The rainfall conditions in this [illegible] area are also favourable for growing garden crops and orchards.

Near the Tungabhadra railway station an area of about 1000 acres is under panchayat forest. To an enquiry made by me regarding the reasons for leaving such a large area with good soil uncultivated, the villagers of the place gave out to understand that the climatic conditions are bad and that the labourers were unwilling to settle and work. A closer examination of the area showed that the soil in most places is deep and good and water table fairly high. This area appears to be eminently suited for garden cultivation and suitable for opening mixed farms, to cultivate garden crops, raise orchards, maintain dairy and poultry farms etc. It is reported that the forest area near the railway station is ear-marked by the Government for starting colonization centre for the ex-military men.

3. Reports : The following reports and papers were written up and submitted by me to the Director of Agriculture during the quarter:-

(a) Annual report of the Agricultural Research Station, Siruguppa for the year 1946-47.

(b) The report on the work done on the Bagavadi Demonstration Farm for the past three years.

(c) Paper entitled "Agricultural Problems of the Tungabhadra Irrigation Project, Madras Presidency".

4. The Agricultural Research Station, Siruguppa and the Bagavadi Demonstration Farm were periodically inspected by me during the quarter and the two agronomists who succeeded me were acquainted with the details of the working of the station. The Director of Agriculture, Madras and the Head-quarters Deputy Directors of Agriculture, Madras visited the Research Station, at Siruguppa and also the Bagavadi Demonstration Farm. Important points in connection with the project work were discussed during their visit.

5. Supervising Committee meeting: During the quarter I attended the meeting of the Supervising Committee as and Ex-officio member and took part in the discussions. From the review of results of the experiments so far conducted on the Agriculture Research Station, Siruguppa, and experience gained at Bagavadi Farm for the past three years, the committee felt that the cultivation and irrigation schemes connected with the project should be suitably revised.

M. CHINNASWAMY NAIDU,
Deputy Director of Agriculture.
Tung bhadra Project, Siruguppa

Read by
V. Balasubramaniam
7.11.53.

Examined by
G. Raman
7.11.53

Nandyal in Kurnool district where the Cuddapah-Kurnool branch of Tungabhadra Project irrigates the lands was also visited during this quarter. It was seen that the soil in this place is altogether of a different origin and the nature of slate-stone underground which is entirely different from what is found in the Bellary district. At Nandyal, irrigation both under the Cuddapah-Kurnool and tank system was studied. The cultivators in this place as in Bellary District are mainly interested in the cultivation of paddy and no dry irrigated crops, though the cultivation of paddy under the canal irrigation is slightly different from those obtaining in Bellary district. It was seen that the paddy crops under the Cuddapah-canal system at Nandyal is cultivated partly as a dry crop to start with and partly as a wet crop later; whereas under the tank system of cultivaion at Nandyal, paddy is purely raised as a trasnsplated crop. The transplanted paddy received a lot of green leaves, groundnut cake and artificial manures and yields as much as 3000-4000 lb. of grain while that which is sown under the canal irrigation as a dry crop in June-July gives only 2000-2500 of grain, The later crop gets only some cattle manure and manures of no other kind besides.

It was also seen that wherever paddy is grown under the tank irrigation either in Bellary or Kurnool, the lands are levelled better and water is being utilised by the cultivators with greater care than under the canal system. For want of proper levelling of lands water is largely wasted especially in Nosoet taluk where the duty of water is reported to be not higher than 10, while it wought to work normally at 40-50 duty for paddy any where. Proper levelling of lands are required to be aimed at in the new project to reduce water requirements of crops and to increase duty of water.

4. Reports and return: The two important reports that were submitted by me during this quarter are:

(a) Proposals for the reorientation of experiments to be conducted at the Agricultural Research Station, Sirugupa.

(b) Revised proposals of cropping scheme for the Tungabhadra Project.

5. The audit of the office of the Assistant Cotton Specialist, Agricultural Research Station, Sirugupa was taken up and completed during the quarter.

6. General: The Agronomist who is new to the cultivation and irrigation of crops on the black soil was guided and instructed at every stage in the conduct of general experiments at the Agricultural Research Station, Sirugupa.

The Hon'ble Minister for Agriculture and Industries visited the station twice during the quarter and the Hon'ble Minister for Finance, once. Besides, there were several other distinguished visitors like the Chief Engineer (Special) for Tungabhadra, Chief Engineer for irrigation, Madras, and the Commissioner for the Ceded Districts' Economic Development Board. Therewere all met by me and problems connected with the Tungabhadra Project were discussed with them in detail.

M. CHINNASWAMY NAIDU,

Deputy Director of Agriculture,
Tung bhadra Project, Sirugupa.

Read by
V. Balasubramanian
7.11.53.

Examined by
G. Raman
7.11.53

in summer months with the supply of water that may be available in the reservoir.

To offset the receipt of the good rains in the early moonsoon period, there was complete failure of the ~~xxxxxxxx~~ north-east monsoon rains. While the dry crops sown on the black soils of the tract which got soaked well with the early rains, came up and yielded well, the Cambodia Cotton, wheat and other irrigated crops grown on the staion could not progress and give such ~~xx~~ satisfactory yields in the absence of regular irrigations which could not be given due to the break down in the two oil engines used on the station in pumping water for irrigation purposes and also due to several leaks existing in the pipeline conveying the pumped water to the station. As a result of all these difficulties and disabilities, the irrigated hingari crops on the station could yield only as much as the dry land crops and the yields were only about 25 per cent of the normal irrigated crops obtained on the staion in the previous years. This again proves that the irrigated crops to be advocated for growing in the project would require an assured and regular supply of water in the complete absence of rains and not a mere soaking pre-irrigation or a sort of occasional and irregular irrigations especially in the case of the hingari crops.

4. Other points discussed in the above meeting were about the trial and choice of a suitable variety of paddy which can be grown in the late season (November to February) referred in the G.O. sanctioning the new cropping scheme. The experience gained elsewhere in the presidency shows that any paddy sown or planted in the months of November- December, when the temperature of the soil is low and the weather cold, would ~~xxxxxxx~~ not grow and yield satisfactorily. This trial of the late season varieties of paddy was already taken up on the station during the year 1947-48, with six varieties of local paddy. They were sown broadcast in November. None of the varieties gave more than 1000 lb. of grain per acre and the yields are poor.

5. During my tour in the quarter, enquiries in Bellary district were made for the availability of such late season varieties. From the enquiries made so far no variety of paddy to suit the cold season could be obtained. However it is ~~xxxxxxxxxxxxxx~~ proposed to make elaborate trials with a number of paddy varieties to be obtained within, and from outside the presidency. Besides the varietal trials proposed to be made, some cultural and seasonal trials also were arranged to be taken up from 1948. The Agronomist in charge of the station was asked ~~xx~~ try sowing of the late season paddy crop by drill as a dry one to start with, with the help of the rains that are generally received in August-September or elsewith a ~~xx~~ preliminary soaking irrigation given in the absence of the rains. Attempts to sow the crops early and as a dry one is likely to give a good start to the crop When the crop is about 6 to 8 week old, the paddy fields would commence to receive regular irrigations and would later on be treated completely as a wet crop under swampy conditions. This might help to get over the difficulty of starting and establishing the crop in the later months when the season is cold and the temperature of the soil falls down, for establishing a good paddy crop. If this trial succeeds there will be saving of labour required for planting and weeding the paddy crop and may help to save much water now required by the paddy crop treated as a wet one completely from the time of puddling to its harvest.

6. During the quarter the following reports and papers were prepared.

(a) Detailed cropping scheme and experiments to be conducted on the Agricultural Research Station, Siruguppa, as per the new project programme and according to the cropping scheme approved by the Government.

Read by
N. Balasubramanian
2.12.53.

Examined by
[illegible]
7-12-53

9. Green Manure Crop Trials: With a view to find out the best green manure crop and the most appropriate time to raise it, monthly sowing trials with six green manure crops are being conducted on the station since last April. One, of the aims in this trial is to see in what seasons the several green manure crops would produce seeds. The six varieties of the green manures under trial now are, Sunnhemp, Dencha, Daincha, Pillipesara, Cluster beans and Sesbania speciosa. Most of them seem to come to best when sown in April and May while the earlier sowings done in July in other fields of the station have not fared so well. The sowings of these green manure crops will be continued and observations made till the results are obtained.

10. Sushavadi demonstration farm: This being one of the border villages situated on the banks of the Tungabhadra river, some of the rich and leading cultivators have left the village due to the recent border troubles abandoning the cultivation of their lands to the poor people in the village. On this account the progress made in the cultivation of the lands brought newly under irrigation is slow. The hingari crops in the demonstration farm were not sown by the cultivators till the end of June since the supply of water could not be made available for them, due to the frequent breaches occurred in the channel bunds as reported by the Supervisor, Public Works Department in charge of the supply of water to this farm.

11. Plant breeding work: The Cambodia cotton breeding work continues to be in progress. The laboratory examination of the cotton samples picked from the breeding plots in the hingari season was completed during the quarter by ginning the kapas and examining the lint for their ginning percentage, length, quality etc. The desirable ones being selected and retained for further testing and sowing, the rest were rejected. The seed material of the selected ones is ready for sowing in the coming season. Some of the crosses Parbjani, Mysore and Lahore varieties of Cambodia cotton are promising.

12. The breeding of the Hingari Jonna. Several types of Hingari jonna were sown in the last hingari season and the yields obtained this season are fair and satisfactory. The absence of rain during the north-east monsoon and the prevalence of good bright weather may be one of the reasons for their good performance this year.

13. Audit and inspection work: The audit of accounts of the office of the Assistant Cotton specialist Sirugupa, for the sixmonths ending by 31-3-48 and that of the office of the Agronomist, for two years, from April 1946 to March 1948 were conducted during the quarter.

14. The Hon'ble Premier, Madras, accompanied by the Hon'ble minister for Industries and other distinguished visitors visited the station on the 29th of June 1948. He was taken round and shown some of the standing crops. The objects of the work on the station and the results achieved so far were briefly explained to him and other visitors.

CHITTASWAMY NAIDU,

Deputy Director of Agriculture,
Tungabhadra Project, Bellary.

Read by
Balakrishnan 7.11.53
Examined by
G Raman 7.11.53

FOOD & AGRICULTURE (K) DEPT.

SUMMARY.

To A.S.

In a note of inspection dated 8-12-1941 of the Sirugappa Agricultural Research Station, Mr. G.M. Priestly, the then Adviser to the Governor of Madras, stated that the Agricultural problems relating to the Tungabhadra Project were as important as the engineering problems as the primary object of the project is to produce more and better crops in certain areas which will be almost entirely in the Bellary District and that the Sirugappa Station which was established in 1940 for investigating the reactions of soils to light irrigations with the water from the Tuhgabhadra and for determining the lines of soil management and crop raising for profitable irrigation-agriculture has not produced results which would give a definite guidance as to the agricultural policy that should be pursued and the crops that should be grown in the project area. He suggested among other things as follows:-

"The Agricultural Department should make the results of the experiments regarding the cultivation and irrigation of black cotton soil made at the Station known to workers in the same field by publishing in technical journals the results with explanations as to how those results were deduced and as to the layout of the experiments."

2. The Director of Agriculture stated that the results of the experiments were published in the Agricultural Station Reports but that in regard to publication in scientific journals it was necessary to examine, analyse and synthesis data for which more repetition of seasons will be necessary. The Government considered that the results of the experiments regarding the cultivation and irrigation of black cotton soil in Tungabhadra

area should be got into shape and published in scientific journals as soon as possible. The Director of Agriculture was accordingly requested to take necessary action in this regard and submit a report to Government.

3. With reference to 'X' above, the Director of Agriculture submitted to Government, an article on Agricultural problems of Tungabhadra Project prepared by the Deputy Director, Tungabhadra Project, based on the results conducted at the Agricultural Research Station, Siruguppa for publication in the Indian Journal of Agricultural Science. In this Department's letter at pages 19-20 current file the report was forwarded to the I.C.A.R. for favour of publication in the 'Indian Journal of Agricultural Science.' The Director of Agriculture was also requested to obtain the remarks of the A.I.D.Bd. and the C.E. (Sol) Tungabhadra Project on this article and submit them to Government. The A.I.D.Bd. have stated that as the Government in the P.W.D. have already passed definite orders in G.O.NO.80 P.W. dated 10-1-1948 regarding the cropping scheme in the project area, it will serve no useful purpose to consider the matter at this stage again at a meeting of the Board. The Chief Engineer (Spl) also stated that the paper 'Agricultural Problems of the Tungabhadra Irrigation Project' had already been considered during the discussions at the Conference held at Sirugappa on 23-12-1947 when H.M.(P.W) and H.M.(Agri) were present. He therefore considered that there was no case for taking up the subject again. In his letter at p.57 c.f. the Director of Agriculture agreed with the views of the Chief Engineer(Spl). P.W.D. and this Department have agreed that the article need not be taken up again for discussion.

4. In their letter at p.35 c.f. the I.C.A.R. stated that the paper at flag (S) would require revision in the light of the remarks of the referees of the Editorial Board of the 'Indian Journal of Agricultural Science.' The paper was accordingly returned to the Director of Agriculture for

Read by [illegible] 7.11.53.

Examined by [illegible] 7.11.53

revision. The revised article at flag (B) received from the Director of Agriculture was again forwarded to the I.C.A.R. for publication. It has not yet been published in the Journal. In their letter at p.95 c.f. the I.C.A.R. have stated that the article will be released from the press as early as possible. They may now be reminded. The draft letter below is for approval. After issue, the papers may be recorded with a Call Book entry against 1-6-50 to watch the Council's reply. For orders.

K. SRINIVASA AIYANGAR,
Deputy Secretary to Government.

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G.C. MS. No.962, Dated 19-5-1950.

SUB: AGRICULTURE - Research - Agricultural Research Station, Sirugappa, Bellary District - Publication of the article on "Agricultural Problems of Tungabhadra Project" prepared by the Deputy Director of Agriculture; Tungabhadra Project in "Indian Journal of Agricultural Research."

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R.N./30-10-53.

SUPERINTENDENT.

Read by W Balasubramaniam 7.11.53

Examined by G Rama 7.11.53